

## CLAIMS

1. An image rendering apparatus comprising:  
an image rendering means for rendering an image;  
5 an antialiased image forming means for forming a partially antialiased image by extracting data corresponding to a predetermined line part of the rendered image and for performing antialiasing processing on the extracted data; and  
an overwriting means for overwriting the partially antialiased image onto the rendered image.
- 10
2. An image rendering apparatus according to claim 1, wherein said antialiased image forming means extracts only contour lines of the rendered image or extracts the contour lines and contour candidates thereof as the predetermined line part.
- 15
3. An image rendering apparatus according to claim 1, wherein said image rendering means renders the image according to polygon information, and wherein said antialiased image forming means extracts the predetermined line part according to information that is included in the polygon information and that indicates what part of the rendered image the polygon information corresponds to.
- 20
4. An image rendering apparatus according to claim 1, wherein said antialiased image forming means performs antialiasing processing by determining pixel values of pixels, through which an ideal line corresponding to said line part represented by the extracted data passes, according to a ratio of the area occupied by the ideal line to that
- 25 of each of the pixels.
5. An image rendering apparatus according to claim 4, wherein said antialiased

image forming means determines pixels, on which antialiasing processing is performed, along a direction of X-axis when an angle, which a line represented by the extracted data or the ideal line forms with X-axis, is equal to or larger than a predetermined value, and wherein said antialiased image forming means determines pixels, on which  
5 antialiasing processing is performed, along a direction of Y-axis orthogonal to X-axis when an angle, which a line represented by the extracted data or the ideal line forms with X-axis, is smaller than the predetermined value.

6. An image rendering apparatus according to claim 4, wherein said antialiased  
10 image forming means detects the ratio of the area in units of sub-pixels into which one  
pixel is virtually divided.

7. An image rendering method comprising the steps of:  
rendering an image;

15 forming a partially antialiased image by extracting data corresponding to a predetermined line part of the rendered image and performing antialiasing processing on the extracted data; and

overwriting the partially antialiased image onto the rendered image.

20 8. An image rendering method according to claim 7, wherein, said step of forming a partially antialiased image includes a step of extracting only contour lines of the rendered image or extracting the contour lines and contour candidates thereof as the predetermined line part.

25 9. An image rendering method according to claim 7, wherein said step of rendering an image includes a step of rendering the image according to polygon information, and wherein said step of forming a partially antialiased image includes a step of extracting

the predetermined line part according to information that is included in the polygon information and that indicates what part of the rendered image the polygon information corresponds to.

- 5 10. An image rendering method according to claim 7, wherein said step of forming a partially antialiased image includes a step of performing antialiasing processing by determining pixel values of pixels, through which an ideal line corresponding to said line part represented by the extracted data passes, according to a ratio of the area occupied by the ideal line to that of each of the pixels.

10

11. An image rendering method according to claim 10, wherein said step of forming a partially antialiased image includes a step of determining pixels, on which antialiasing processing is performed, along a direction of X-axis when an angle, which a line represented by the extracted data or the ideal line forms with X-axis, is equal to or  
 15 larger than a predetermined value, and also includes a step of determining pixels, on which antialiasing processing is performed, along a direction of Y-axis orthogonal to X-axis when an angle, which a line represented by the extracted data or the ideal line forms with X-axis, is smaller than the predetermined value.

- 20 12. An image rendering method according to claim 10, wherein said step of forming a partially antialiased image includes a step of detecting the ratio of the area in units of sub-pixels into which one pixel is virtually divided.

13. A storage medium for storing a computer program, wherein said program  
 25 comprising the steps of:

rendering an image;

forming a partially antialiased image by extracting data corresponding to a

Subpart 7

predetermined line part of the rendered image and performing antialiasing processing on the extracted data; and

overwriting the partially antialiased image onto the rendered image.

5 14. A storage medium according to claim 13, wherein said step of forming a partially antialiased image includes a step of extracting only contour lines of the rendered image or extracting the contour lines and contour candidates thereof as the predetermined line part.

10 15. A storage medium according to claim 13, wherein said step of rendering an image includes a step of rendering the image according to polygon information, and wherein said step of forming a partially antialiased image includes a step of extracting the predetermined line part according to information that is included in the polygon information and that indicates what part of the rendered image the polygon information corresponds to.

15 16. A storage medium according to claim 13, wherein said step of forming a partially antialiased image includes a step of performing antialiasing processing by determining pixel values of pixels, through which an ideal line corresponding to said line part  
20 represented by the extracted data passes, according to a ratio of the area occupied by the ideal line to that of each of the pixels.

25 17. A storage medium according to claim 16, wherein said step of forming a partially antialiased image includes a step of determining pixels, on which antialiasing processing is performed, along a direction of X-axis when an angle, which a line represented by the extracted data or the ideal line forms with X-axis, is equal to or larger than a predetermined value, and also includes a step of determining pixels, on

which antialiasing processing is performed, along a direction of Y-axis orthogonal to X-axis when an angle, which a line represented by the extracted data or the ideal line forms with X-axis, is smaller than the predetermined value.

5 18. A storage medium according to claim 16, wherein said step of forming a partially antialiased image includes a step of detecting the ratio of the area in units of sub-pixels into which one pixel is virtually divided.

19. A server apparatus comprising:

10 a storage medium for storing a computer program; and

a distributing means for distributing the computer program stored on the storage medium, wherein said program having the steps of:

rendering an image;

15 forming a partially antialiased image by extracting data corresponding to a predetermined line part of the rendered image and performing antialiasing processing on the extracted data; and

overwriting the partially antialiased image onto the rendered image.

20. A computer program comprising the steps of:

20 performing antialiasing processing on at least a limited portion including a predetermined line part of a image, when the image is rendered.

21. A computer program according to claim 20, wherein said predetermined line part includes at least a contour of the image.

25

22. A computer program according to claim 20, which further comprises the steps of extracting data corresponding to said limited portion from data representing the image,

A computer program accomplishes the task of rendering the image; and overwriting an image of the

- Sub 5

[illegible]

1. [Introduction](#)

2. [Background](#)

3. [Methodology](#)

4. [Results](#)

5. [Discussion](#)

6. [Conclusion](#)

7. [References](#)

8. [Appendix](#)

9. [Index](#)

10. [Glossary](#)

11. [Bibliography](#)

12. [List of Figures](#)

13. [List of Tables](#)

14. [List of Abbreviations](#)

15. [List of Symbols](#)

16. [List of Equations](#)

17. [List of Figures](#)

18. [List of Tables](#)

19. [List of Abbreviations](#)

20. [List of Symbols](#)

21. [List of Equations](#)

22. [List of Figures](#)

23. [List of Tables](#)

24. [List of Abbreviations](#)

25. [List of Symbols](#)

26. [List of Equations](#)

27. [List of Figures](#)

28. [List of Tables](#)

29. [List of Abbreviations](#)

30. [List of Symbols](#)

31. [List of Equations](#)

32. [List of Figures](#)

33. [List of Tables](#)

34. [List of Abbreviations](#)

35. [List of Symbols](#)

36. [List of Equations](#)

37. [List of Figures](#)

38. [List of Tables](#)

39. [List of Abbreviations](#)

40. [List of Symbols](#)

41. [List of Equations](#)

42. [List of Figures](#)

43. [List of Tables](#)

44. [List of Abbreviations](#)

45. [List of Symbols](#)

46. [List of Equations](#)

47. [List of Figures](#)

48. [List of Tables](#)

49. [List of Abbreviations](#)

50. [List of Symbols](#)

51. [List of Equations](#)

52. [List of Figures](#)

53. [List of Tables](#)

54. [List of Abbreviations](#)

55. [List of Symbols](#)

56. [List of Equations](#)

57. [List of Figures](#)

58. [List of Tables](#)

59. [List of Abbreviations](#)

60. [List of Symbols](#)

61. [List of Equations](#)

62. [List of Figures](#)

63. [List of Tables](#)

64. [List of Abbreviations](#)

65. [List of Symbols](#)

66. [List of Equations](#)

67. [List of Figures](#)

68. [List of Tables](#)

69. [List of Abbreviations](#)

70. [List of Symbols](#)

71. [List of Equations](#)

72. [List of Figures](#)

73. [List of Tables](#)

74. [List of Abbreviations](#)

75. [List of Symbols](#)

76. [List of Equations](#)

77. [List of Figures](#)

78. [List of Tables](#)

79. [List of Abbreviations](#)

80. [List of Symbols](#)

81. [List of Equations](#)

82. [List of Figures](#)

83. [List of Tables](#)

84. [List of Abbreviations](#)

85. [List of Symbols](#)

86. [List of Equations](#)

87. [List of Figures](#)

88. [List of Tables](#)

89. [List of Abbreviations](#)

90. [List of Symbols](#)

91. [List of Equations](#)

92. [List of Figures](#)

93. [List of Tables](#)

94. [List of Abbreviations](#)

95. [List of Symbols](#)

96. [List of Equations](#)

97. [List of Figures](#)

98. [List of Tables](#)

99. [List of Abbreviations](#)

100. [List of Symbols](#)

101. [List of Equations](#)

102. [List of Figures](#)

103. [List of Tables](#)

104. [List of Abbreviations](#)

105. [List of Symbols](#)

106. [List of Equations](#)

107. [List of Figures](#)

108. [List of Tables](#)

109. [List of Abbreviations](#)

110. [List of Symbols](#)

111. [List of Equations](#)

112. [List of Figures](#)

113. [List of Tables](#)

114. [List of Abbreviations](#)

115. [List of Symbols](#)

116. [List of Equations](#)

117. [List of Figures](#)

118. [List of Tables](#)

119. [List of Abbreviations](#)

120. [List of Symbols](#)

121. [List of Equations](#)

122. [List of Figures](#)

123. [List of Tables](#)

124. [List of Abbreviations](#)

125. [List of Symbols](#)

126. [List of Equations](#)

127. [List of Figures](#)

128. [List of Tables](#)

129. [List of Abbreviations](#)

130. [List of Symbols](#)

131. [List of Equations](#)

132. [List of Figures](#)

133. [List of Tables](#)

134. [List of Abbreviations](#)

135. [List of Symbols](#)

136. [List of Equations](#)

137. [List of Figures](#)

138. [List of Tables](#)

139. [List of Abbreviations](#)

140. [List of Symbols](#)

141. [List of Equations](#)

142. [List of Figures](#)

143. [List of Tables](#)

144. [List of Abbreviations](#)

145. [List of Symbols](#)

146. [List of Equations](#)

147. [List of Figures](#)

148. [List of Tables](#)

149. [List of Abbreviations](#)

150. [List of Symbols](#)

151. [List of Equations](#)

152. [List of Figures](#)

153. [List of Tables](#)

154. [List of Abbreviations](#)

155. [List of Symbols](#)

156. [List of Equations](#)

157. [List of Figures](#)

158. [List of Tables](#)

159. [List of Abbreviations](#)

160. [List of Symbols](#)

161. [List of Equations](#)

162. [List of Figures](#)

163. [List of Tables](#)

164. [List of Abbreviations](#)

165. [List of Symbols](#)

166. [List of Equations](#)

167. [List of Figures](#)

168. [List of Tables](#)

169. [List of Abbreviations](#)

170. [List of Symbols](#)

171. [List of Equations](#)

172. [List of Figures](#)